

THE COSMIC ELEMENTS IN RELIGION, PHILOSOPHY, ART AND LITERATURE

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THE SEARCH FOR THE ARCHE
IN THE PRE-SOCRATIC PHILOSOPHERS
(THE MILESIAN SCHOOL).
A PATH TO DIALOGUE

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The glories of ancient Greece extend not only to its imperishable legacy of literature, sciences, and art, but also to the fact of being the cradle of Western philosophy. Its great originality has exerted a major influence on the formation of Christian thought. It is common knowledge that the Philosophy of the Greco-Roman world from the sixth century BC to the sixth century AD has laid the foundations for all subsequent Western Philosophy.

The birthplace of Greek Philosophy was the seaboard of Asia Minor (present day Turkey) and the early Greek philosophers were Ionians. It was in Ionia that the new Greek civilization arose. When social life was settled then rational reflection evolved with a search for the *arche*, i.e., the first principle of whatever is real. Thus, Western Philosophy started with the Hellenic conception of Nature; its main effort was to try to explain and to rationalise nature.

All philosophers before Socrates are known together as 'Presocratic philosophers'. Within the Presocratics, the Ionian School refers to the first group which includes those philosophers established in the city of Miletus (hometown of Thales, Anaximander and Anaximenes),

and those coming from other cities, such as Heraclitus, Anaxagoras, Archelaus, etc.

I. THE BIRTH OF PHILOSOPHY: FROM MYTH TO LOGOS

We might ask ourselves: Which was the factor that placed the beginning of philosophy with the Greeks in a particular moment of history? It is undeniable that the main questions posed by philosophers had been already posed earlier by poets, seers, and the common man. What characterizes the birth of Philosophy is the methodological approach and the liberation of reason from mythological thought. Let's analyse the following concepts:

- *Myth*: It is a narrative story formed by a particular community about the 'big questions' of life such as the origin of the universe (cosmogony); the nature of the universe (cosmology) and of the entities contained therein; the origin and nature of human beings; the good for human beings and the ways to attain it. It always involves a sort of calendar of feasts and celebrations that mark cycles in nature and in the history of the community. It also involves sometimes a sort of 'priesthood'.
- *Philosophy*: It is a rational and systematic inquiry into the same 'big questions' of life that concern myth. The main difference is in the methodology since philosophy proceeds by way of dialectic from what is better known to what is less known and then by way of descent from general principles to particular conclusions. It does not by its nature involve liturgical practice, though this can be grafted on to it. It might nonetheless involve a 'way of life' because of the doctrinal and moral formation given to the adherents of particular philosophical communities, which imply not only knowledge but also a way of life.
- *Natural Science*: A systematic theoretical and experimental inquiry into the principles and operations of nature. Ordinarily, it does not of itself involve a full 'way of life,' though it can, as a practice, be a part of a particular way of life.

2. THE NATURE OF EXPLANATION IN THE PRESOCRATICS: RATIONAL APPROACH

To understand the Presocratics is not easy due to the incomplete nature of our evidence. Most of them wrote at least one 'book' (prose writing or poems), but no complete work survives. Instead, we are dependent on later philosophers, historians, and compilers for disconnected quotations (fragments) and reports about their views (*testimonia*). In many cases, the line is indirect and often depends on the works of Aristotle, his disciple Theophrastus, and other ancient philosophers. However, even if any account of a Presocratic thinker is a reconstruction we can have a good grasp of their main ideas.

The term 'Presocratic philosophers' was coined by Hermann Diels in the nineteenth century, and was meant to mark a contrast between the teachings of Socrates (470–399 BC), who was mainly interested in moral problems, and the ones of his predecessors, who were primarily concerned with cosmological and physical speculation. Even though there has been some debate about the appropriateness of this name, it is widely accepted.

When we apply the term «philosophers» to this group of thinkers we are aware that this term does not have the same connotation as it has in today's world. They considered themselves as inquirers into many things to the extent that they were concerned with astronomy, physics, chemistry, meteorology, psychology, and so on, as well as with metaphysics, epistemology and ethics.

If we compare the 7th century BC poem of Hesiod, *Theogony* (genealogy of the gods), with the writings of the Presocratics we find that the latter represent the passing from myth to logos. Hesiod tells the traditional story of the Olympian gods, beginning with Chaos, a vague divine primordial entity or condition. From Chaos, a sequence of gods is generated. Each divine figure that arises is connected with a part of the physical universe, so his theogony is also a cosmogony (an account of the generation of the world). The divinities (and the associated parts of the world) come to be and struggle violently among themselves; finally Zeus triumphs and establishes and maintains an order of power among the others who remain. Hesiod's world is one in which the major divinities are individuals who behave like super-human beings (Gaia or earth, Ouranos or sky, Cronos, Zeus). For the Greeks, the fundamental properties of divinity were immortality and power, and each of Hesiod's characters has these properties (even though in the story some

are defeated, and seem to be destroyed). In a second poem, *Works and Days*, Hesiod pays more attention to human beings, telling the story of earlier greater creatures who died out or were destroyed by themselves or Zeus. Humans have been created by Zeus, are under his power and subject to his judgment and to divine intervention for either good or ill. Hesiod's world, like Homer's, is one in which the gods may intervene in all aspects of the world, from the weather to mundane particulars of human life, reaching into the natural world order from outside, in a way that humans must accept but cannot ultimately understand.

The Presocratics reject this account and look at the world as a *kosmos*, i.e., an ordered natural arrangement, inherently intelligible and not subject to supra-natural intervention. Presocratic thought is clearly independent from religion. It is a kind of natural enlightenment, which eventually would lead to the need of a First Cause.

Calling *philosophers* to the Presocratics also suggests that they share a certain outlook with one another; an outlook that can be contrasted with that of other early Greek writers. Although scholars disagree about the extent of the divergence between the early Greek philosophers and their non-philosophical predecessors and contemporaries, it seems evident that Presocratic thought exhibits a significant difference not only in its understanding of the nature of the world, but also in the sort of explanation of it.

3. THE IONIAN (MILESIAN) PHILOSOPHERS: DOXOGRAPHY

The great majority of Greek (and Roman) philosophical writings have been lost. However we do have other ancient authors quoting them. These quotations are called 'doxography', which could be translated as 'tenet-writing'. Doxography encompasses those writings, or parts of writings, in which the author presents philosophical views of some of the ancient philosophers.

The creator of the term 'doxography' (from the Latin neologism '*doxographi*') was the same Hermann Diels. He used this term to refer to the authors of a rather strictly specified type of literature which was edited in his monumental *Doxographi Graeci* ('Greek Doxographers') of 1879.

Diels traced back mutually corresponding passages in later authors to the reporter Theophrastus and collected all these 'fragments' in two fundamental works he published later on: the *Poetarum Philosophorum*

Fragmenta ('Fragments of the Poet-Philosophers') of 1901, reprinted in 2000, and the famous, several times revised (in later editions by Diels' collaborator Kranz), and often reprinted, *Fragmente der Vorsokratiker* ('Fragments of the Presocratics', abbreviated DK), which was first published in 1903.

This work remains as the standard collection of texts of the Presocratics. In it, each thinker is assigned an identifying chapter number and the fragments are collected in three sections and numbered in order: 'Testimonies' (Section A) contains texts from ancient authors about that thinker's life and thought; 'Fragments' (Section B) contains direct quotations; 'Imitations in later authors' (Section C)¹.

The authors representative of doxography are: Cicero, 1st c. BC (indispensable source for the debates among the schools of Hellenistic philosophy, especially Stoicism, Epicureanism, and Academic Skepticism); Philodemus, 1st c. BC; Ps-Plutarch, 2nd c. AD (author of *Placita* ('tenets', 'doctrines') dealing with physics in five books ranging from first principles to diseases). Plutarch, c. 45 – c. 140 AD, (especially his polemical treatises against Epicureans and Stoics); Clement of Alexandria, (2nd c. AD) (In his *Stromateis* explains the views of poets and prose-writers, philosophers and others, on a great variety of issues); Diogenes Laërtius, (3rd c. AD) (author of the famous *Lives of Eminent Philosophers*); Hippolytus, (3rd c. AD); Stobaeus, (5th c. AD); Theodoret, (5th c. AD), etc.

According to Aristotle, each of the first philosophers tried to reduce the many to the one by positing one of the 'elements' as the really real material principle – the *ousia* – and claiming that all the other elements are, appearances to the contrary, simply permutations of that really real one. Interestingly, each chose a different element: Thales, water; Anaximenes, air; and Anaximander, apeiron.

4. THALES OF MILETO (624–546 BC)

Aristotle, in his *Metaphysics*, deals with many of the tenets of the Presocratic philosophers. One of his quotations, which in the book of Diels appears classified as A12 under the heading of Thales, introduces us into the teachings of this first philosopher:

¹ In this way, each fragment can be uniquely identified. For example, DK 59B12.3 identifies line 3 of Anaxagoras fragment 12.

Of the first philosophers most thought the principles which were of the nature of matter were the only principles of all things. That of which all things that are consist, the first from which they come to be, the last into which they are resolved (the substance remaining, but changing in its modifications), this they say is the element and this the principle of things, and therefore they think nothing is either generated or destroyed, since this sort of entity is always conserved. [...] Yet they do not all agree as to the number and the nature of these principles. Thales, the founder of this type of philosophy, says the principle is water (as the earth appears to rest on water), taking perhaps this supposition from seeing that the nourishment of all things is moist, and because the sperm of all living things is moist, and water is the principle (*arche*) of all things whose nature it is to be moist².

Most biographical data about Thales comes from Diogenes Laertius' *Lives of Eminent Philosophers*. However this work is not fully reliable since the distinction between history and legend is not always clear. There is also information provided, centuries earlier, by the Greek historian Herodotus. All of them praise Thales as a man of great capacity who had predicted a solar eclipse, determined the sun's course from solstice to solstice, had political and military achievements, among other merits.

At most there is only one book attributed to him, *On Nautical Star Charts*. However it was lost already during Plato's days. Thales is considered one of the seven wise men of Greece and the beginner of philosophical thought. His claim that some form of matter was the origin of all things is what distinguishes him as different from the poets and others. For Thales water is the really real. From his phrase that 'everything is full of gods' Aristotle surmises that Thales identified soul (that which makes a thing alive and thus capable of motion) with something in the whole universe, and so supposed that everything was full of gods —water, or soul, being a divine natural principle.

Thales marks a radical change from all other previous sorts of accounts of the world (both Greek and non-Greek). Like the other Presocratics, Thales sees nature as a complete and self-ordering system, and finds no reason to call on divine intervention from outside the natural world to supplement his account —water itself may be divine, but it is not something that intervenes in the natural world from outside.

It is important to mention that most of the concepts used in the fragments about his teachings are not of his time, but of Aristotle's times:

² Aristotle, *Metaphysics* A3 983b.

for instance, *arche*, elements, matter, form... they are an elaboration of the reporter, in this case Aristotle. Thus, there still remains an open question which the exact teachings of Thales and other Presocratics were.

Water, together with earth, air and fire, constitute the basic stuff of the physical world —the ‘elements’— and are a common occurrence in various cosmological accounts (for instance, the *pancha bhutha*, in Hindu thought). In older mythological narrations these four elements were under the power of the gods. The contribution of the Milesian philosophers was to replace the invisible powers of the gods with these four elements which somehow constitute the whole of nature. Thales considered ‘water’ as the primary element, but he was not original in this since ‘water’ was also primary in some cosmogonical mythologies. His originality is that he leaves the gods out of any explanation about the creation of the world or of the things in it.

Aristotle, who is the source of the A-fragments associated with Thales, consider each element as ‘nature’. In his *Metaphysics*³ he attributes different meanings to the term ‘nature’ (*physis*). One of the meanings is “the primary stuff, shapeless and unchangeable ... of which any natural object consists or from which it is produced: e.g. bronze is called the ‘nature’ of a statue and of bronze articles ...it is in this sense that men call the elements of natural objects the ‘nature’... fire...earth or air or water.” Thus when the Milesians search for the origin of things they are searching for their nature. Let’s look at another quotation from Thales:

A14: [The earth] lies upon water, this is the oldest account that has come to us which, it is said, Thales the Milesian held because it remains floating like a log or some such thing (for things do not remain upon air but upon water, as if the same argument about the earth did not apply to the water which supported the earth⁴).

The explanation is a very rudimentary one. But what matters for philosophy is that nature is the object of study now. Thus, Ionian natural philosophy became a sort of a materialist philosophy. The exact meaning of what Thales said is difficult to explain: whether everything comes from water or needs water or is composed of water. But, again, his merit lies in posing the question and giving a rational answer to it.

³ Aristotle, *Metaphysics*, Fifth book, 1014b.

⁴ Aristotle, *On the Heavens* B13 294a 28.

Another idea that we have in one of the fragments about Thales is the one of soul and motion, even though in a very sketchy way. Aristotle wrote that «it seems that Thales, from what they relate, supposed the soul to be somehow related to motion, if indeed he said the [Magnesian] stone to have soul, because it moves iron»⁵. It is a very vague fragment but it is important since it relates ‘soul’ with ‘motion’. This relationship would be subsequently very much present in Greek philosophy: the soul as the source of motion (*kinesis*) and the seat of consciousness. However, motion does not necessarily mean locomotion, but change.

5. ANAXIMANDER (610–546 BC)

It is accepted that Anaximander was Thales’ disciple. A man of broad interest and of practical inventions (maps, gnomon —sort of sundial—, etc.).

It has been preserved a quotation by him, which it is considered the earliest extant fragment of the Presocratics. However, it has been given to us by Simplicius, in the 6 c. While reading it, we observe that Anaximander does not place any of the elements as the first principle, but some other thing which he calls the *apeiron* (indefinite or indeterminate):

B1. [The first principle is] some other indeterminate nature, from which everything comes to be, the heavens and the worlds in them. And that from which the genesis of existing things is, is also that into which destruction is, according to necessity; for they give justice and compensation to one another for their injustice according to the ordering of time⁶.

Anaximander speaks of something that is unlimited —the *apeiron* (‘peras’ means limit) – as the beginning of everything. For him the really real, which perdures through every transformation and underlies the primary qualities, must be wholly indeterminate and must of itself lack all qualities. It is the indeterminate, the unlimited, the *apeiron*.

The notion of *apeiron* as the origin (*arche*), the material source of things, implies a denial of creation out of nothingness —*creation ex nihilo*— (a concept unknown in Greek philosophy). The *Apeiron* is uncrea-

⁵ Aristotle, *De Anima*, A2 405a19.

⁶ Simplicius, *Commentary on Aristotle’s Physics*, 24, 13.

ted, but it's the first cause of everything. However, as it was with Thales, it is not clear whether the *apeiron* is efficient cause or material cause of all things. It is inaccessible to us through the senses.

In the fragment quoted above (B1) we see that there is opposition among the elements. The elements have properties which originally were identified with them:

Fire---Hot
 Water---Wet
 Earth---Cold
 Air---Dry

The properties of the elements are in opposition and therefore they destroy each other. Water destroys fire since wet and hot cannot coexist.

It seems that Anaximander considered the *apeiron* as a body in between the elements. Since its property is to be boundless then it will overpower the other elements. In fact, for him the elements come from the *apeiron*.

These reflections of the Presocratics lead us to reflect on how one thing can transform itself into the many. We see the transitory nature of this world as opposed to another order of reality which constitutes its ground and is indestructible.

If we go back to the last lines of Fragment B1 we find Anaximander using legal and moral vocabulary. It seems a reference to a sort of cosmic moral order (justice-injustice, penalty). The idea of order in the world is present in the earlier cosmogonies as well as in the presocratics.

In B1 we can distinguish three steps in the origin of the cosmos:

- i. Separation of the elements: generation or birth.
- ii. Interaction of the elements: acts of justice and injustice: when one element 'invades' the territory of another it commits an injustice.
- iii. Destruction as punishment.

Even though there is a perpetual conflict between the elements, nonetheless in due time all physical imbalances will be corrected. The *apeiron* somehow generates the opposites hot and cold. Hot and cold are themselves powers; and it is the actions of these powers that produce the things that come to be in our world. The opposites act on, dominate,

and contain each other, producing a regulated structure. It is this structured arrangement that Anaximander refers to when he speaks of justice and reparation. Over the course of time, the cycles of the seasons, the rotations of the heavens, and other sorts of cyclical change are regulated and thus form a system. This system, ruled by the justice of the ordering of time is in sharp contrast with the chaotic and capricious world of the personified Greek gods who interfere in the workings of the heavens and in the affairs of human beings.

6 ANAXIMENES (CIRCA 6 C. BC)

The pattern that can be seen in Thales and Anaximander of an original basic stuff giving rise to the phenomena of the cosmos is also present in Anaximenes. By replacing Anaximander's *apeiron* with air – thus eliminating the first stage of the coming-to-be of the cosmos – he returns to an originating stuff more like Thales' water. In 13A5, Aristotle's associate Theophrastus, quoted by Simplicius, says:

the underlying nature is one and infinite, yet not indefinite as Anaximander said, but determinate –for he identifies it as air. It differs in thinness and thickness according to the substances which it constitutes, and if thinned becomes fire, if thickened wind, the cloud, the water, then earth, then stones. Other things come from these. He, too, makes motion eternal, and says that change, as well, comes about because of it.

For Anaximenes, air includes atmospheric air as well as mist, fog, etc. It seems that air is neutral but has various properties of colour, temperature, humidity, motion, taste, and smell. It surrounds the universe. It is characterized by internal motion and immensity. It is a divinity.

According to Theophrastus, Anaximenes explicitly states the natural mechanism for change; it is the condensation and rarefaction of air that naturally determine the particular characters of the things produced from the originating stuff.

The processes of condensation and rarefaction became fundamental in explaining how air could transform itself into the other elements and constitute ordinary objects of everyday experience. These processes are connected with cooling and heating. Plutarch (B1) gives the example of breath. Releasing air from the mouth with compressed lips produces cool air, but relaxed lips produce warm air. Thus, for Anaximenes air is the really real. (Permutations result from condensation and rarefaction).

7. FINAL REMARKS

Most probably the Milesian School ended with the fall of Miletus in 494BC. Its main achievement has been to raise the question about the ultimate nature of things, not so much the concrete answers given to the question.

The Milesians were material monists, committed to the reality of a single material stuff that undergoes many alterations but persists through the changes... Yet there are reasons to doubt that this was actually the Milesian view. It presumes that the early Greek thinkers anticipated Aristotle's general theory that change requires enduring underlying substances that gain and lose properties. The earliest Greeks thought more in terms of powers, and the problem of what a substance is was yet to be addressed.

The Milesians have called their first principle 'divine'. But what does 'divine' mean for them? It is a fact that this *arche* or first element is not one more 'god' in the polytheistic Greek pantheon. What is clear is that the Milesian philosophers replaced the immortal gods by an immortal form of matter. The *arche* does not deny the existence of the traditional gods. The Milesians were interested in natural phenomena in keeping with their broad interest in the nature of things. They did not try to analyze any phenomenon in a single occurrence, but they seek explanations of what is universal rather than the particular event.

The Ionian philosophers saw that behind all change and transition there must be something that is permanent. Change is from something that already exists into something else that is new. Change is not a mere conflict between opposites; there must be something permanent behind these opposites. It doesn't matter too much the type of principle they found as *arche*, but what matters is the concept of an underlying unity. The doctrine of the elements helped them to find that underlying unity.

In the context of Interfaith Dialogue I would like to underline the importance that Greek philosophy —of which the Milesian School represents its beginnings— had in the future history of Christianity centuries later. Greek philosophy had as main concern the effort to purify human notions of God from mythological elements, to purify religion by rational analysis. Pope John Paul II wrote in his Encyclical letter on the relationship between faith and reason that «It was on this basis that

the Fathers of the Church entered into fruitful dialogue with ancient philosophy...»⁷.

The attitude towards philosophy on behalf of Christians was on the one hand cautious, since some philosophical attempts were considered as erroneous, but on the other hand there was also an effort for a positive engagement with philosophical thinking. Philosophical speculation was seen like a preparation for the advent of Christianity. Thus Christian authors made use of philosophy for defending the teachings of Christianity from the attacks of the intellectuals of the Roman Empire. And also they made use of philosophical concepts and arguments to develop Christian theology.

Earlier in the twentieth century it was fashionable to speak of the evolution of philosophy as the emergence from theology to natural sciences. Philosophy was then understood as the progressive removal of the divine from the sphere of philosophy. But this is a wrong approach. Yes, it is true that in the Presocratics we find explanations about everything about us as the direct result of divine intervention. But this is not the case with future philosophers such as Plato or Aristotle. For both of them, in different ways, knowledge of the divine is the culminating goal of philosophy where the ultimate cause of things is contemplated.

We find in Presocratic philosophy the roots of future philosophic tendencies. They represent the first attempt to attain rational understanding of the world. They believed that reason is a powerful tool to get to know the truth of the world and eventually the truth about human being and also the Supreme Being.

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⁷ Blessed John Paul II, Encyclical Letter «*Fides et Ratio*» (On the relationship between Faith and Reason), Libreria Editrice Vaticana, Vatican City, 14 September 1998, point 36.

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